

atoms selected from the group consisting of aliphatic ether, aliphatic ester, and aliphatic ketone.

11. The method for isolating and purifying nucleic acids as claimed in Claim 1, further comprises:
 - providing a column with a bottom;
 - placing the support above the bottom;
 - causing the mixed solution to pass one-way through the support to the bottom by a sucking force.
18. The reagents kit as claimed in Claim 14, wherein the organic solvent comprises at least one of aliphatic ether, aliphatic ester, aliphatic ketone.